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ABSTRACT

The Vocational Interest Survey (VIS) is a set of six questionnaire scales for measuring vocational interest. It is designed for Australian users and is consistent with Holland's theory that there are six basic career categories. This paper discusses the development of the VIS and presents some technical data on the questionnaires. Items were provided by the users (in the form of free-association responses) rather than by psychologists. Based on those items, a pilot questionnaire was prepared, which contained three separate lists of 138 occupations, 105 study courses, and 152 activities. Complete-link clustering was used to develop six temporary groups of occupational items. The 105 items relating to study courses were then correlated with the six experimental scales. Further item-analyses were conducted to produce six combined jobs/study courses scales with maximum internal consistency. Finally, activity items were selected and added to the combined jobs/study courses. Reliability of VIS scales was assessed using measures of internal consistency, split-half reliability, and test-retest coefficients. In addition, the intercorrelations of the six VIS scales, the construct validity of the VIS, and the relationship between vocational interests on the VIS and career related characteristics were measured. The appendix provides a listing which summarizes the overall responses to each item. (JAZ)

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INFORMATION PAPER

AN OUTLINE OF THE DEVELOPMENT OF THE VOCATIONAL INTEREST SURVEY AND PRELIMINARY TECHNICAL DATA

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U.S. DEPARTMENT OF EDUCATION
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AN OUTLINE OF THE DEVELOPMENT OF THE VOCATIONAL INTEREST SURVEY AND PRELIMINARY TECHNICAL DATA

The Vocational Interest survey (VIS) provides counsellors and careers advisers with information at low cost and with brief testing time. It provides one more way in which people may learn about occupational options.

The VIS was developed for Australian users, and is consistent with Holland's (1973) theory that there are six basic career categories. However, the questions and categories were developed on a different rationale from Holland's own Vocational Preference Inventory or Self-Directed Search. The format is also different.

The present report provides information on the development of the Vocational Interest Survey and Summarises some initial technical data on the six questionnaire scales which make up the VIS.

1. DEVELOPMENT OF THE VOCATIONAL INTEREST SCALES

The were five steps in the development of the Vocational Interest Survey. The initial emphasis was that items should be provided by the users, rather than by psychologists, in order to ensure that the items included were familiar to a majority of subjects. As well, this ensured that items were novel, interesting and culturally relevant.

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High school subjects (N=148) were asked in a written free-association task to list as many jobs as they could remember in one minute. The rationale for this procedure was that subjects should be able to recognise items which they had recalled from memory and which they had committed to writing. Simialr free-association tasks in relation to leisure, activities and study courses were also administered to the same subjects, who produced 714 jobs, 999 courses and 1006 activities. Some examples of these responses are provided below:

EXAMPLES OF FREE-ASSOCIATION RESPONSES

	Female 15 years	Male 15 years
(A)	JOBS	
	Air hostess	Accountant
	Air steward	Ambulance driver
	Mechanic	Chief
	Travel Agent	Cook
	Bank Teller	Plumber
	Typist	Builder
	Teacher	Bricklayer
	Shop assistant	Policeman
	Housewife	Solicitor
	Navy Officer	Mechanic
		Secretary
		Lawyer
(B)	STUDY COURSES	
	Maths	Law
	English	Teaching
	Science	Cooking
	Geography	New Methods
	History	Books - fiction
		non - fiction
	Law	
	Police work	
	Botanist	
	Marine biologist	
	Bird watcher	

(C) ACTIVITIES

Reading
Writing novels
Swimming
Hockey
Tennis
Surfing
Roller skating
Ice skating
Studying
Playing various sports
Go hunting
Watch T.V.
Go to cinema, driven-in
Stay at home
Spend time outdoors

In the second stage, only those items which occured 2 or more times were included in a pilot questionnaire. This reduced the number of idiosyncratic responses, and only generally familiar responses were retained. The pilot questionnaire contained three separate lists of 138 occupations, 105 study courses and 152 activities arranged in homogeneous interest groups (outdoor, mechanical, computational, scientific, persuasive, artistic, literary, musical, social service and clerical). Subjects were asked to indicate those items liked, and responses were scored like = 1 dislike =0. This pilot questionnaire was then administered to 571 vocational guidance clients (311 females; 260 males) in rural and metropolitan vocational guidance branches throughout the state.

In the third stage, complete link clustering (Johnson, 1967) was used to develop six temporary groups of occupational items, which were of homogeneous content (e.g. all scientific occupations) and broadly consistent with the Holland typology. Itmes comprising

each scale were then selected to correlate higher with their total score, than any other scale. Five subsequent item-analyses correlated each item with the scale totals, until such time as the six experimental scales had maximal internal-consistency. Statistical and technical details of those scales have been reported previously (Athanasou, 1982).

In the fourth stage, the 105 items relating to study courses were correlated with the six experimental scales. Further item-analyses were conducted along the same lines as above to produce six combined jobs/study courses scales with maximal internal consistency. The final stage involved adding and selecting from the 152 activity items to the combined jobs/study - courses. The final number of items, mean scale scores standard deviations and item correlations are listed in Table 1. The appendix provides a listing which summarises the overall response rate to each item.

The uneven number of items in each scale may deserve some comment as it departs from established practice. To a very large extent it reflects the uneven distribution of occupations and activity preferences in the workforce (i.e. the large number of non-professional, semi-skilled and trades). For example, a random sample of 250 occupations listed in the Australian Standard Classification of Occupations (ASCO) showed that some 58% of first letter codes were

Realistic or Practical (Athanasou, 1984). Furthermore, there are relatively few opportunities for practising enterprising activities in school environments (Funder et al. 1983). Results of a study by Funder et al. (1983), suggest that in Australia, different kinds of vocational interest show different developmental trends.

TABLE 1: VOCATIONAL INTEREST SURVEY SCALES - TECHNICAL DATA

SCALE	No. OF ITEMS	SCALE MEAN	SCORES(N=571) STD. DEVN	WOMEN (N=311) MEAN	WOMEN (N=311) STD. DEVN	MEN(N=260) MEAN	MEN(N=260) STD. DVN	STANDARD ERROR OF MEASUREMENT	AVGE ITEM-TOTAL CORRELATION	AVGE INTER-ITEM CORRELATION
PRACTICAL	65	10.93	12.27	7.56	10.76	14.98	12.77	2.51	0.78	0.276
SCIENTIFIC	35	7.49	6.58	6.04	5.84	6.55	6.29	2.08	0.67	0.209
ARTISTIC	40	9.44	8.30	10.61	9.07	8.75	7.58	2.27	0.69	0.234
SOCIAL	39	12.98	9.07	16.23	8.88	9.09	7.69	2.43	0.67	0.246
BUSINESS	19	3.12	3.55	3.12	3.46	3.13	3.68	1.39	0.74	0.228
CLERICAL	24	4.43	5.28	5.27	5.94	3.45	4.18	1.56	0.82	0.309

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Some items in the VIS appear in more than one section (i.e. jobs, courses, activities) of a category and this may lead to the impression that there is considerable overlap in items. However, it seems to be the case that jobs, courses and activities do not constitute a single domain (Holland, 1973). Correlations between these items in the three sections are generally low, and some examples are provided below:

	Job	Course	Activity	Item-Total Correlation	Proportion answering "like"
A. Hairdresser-job	-	.17	.25	.686	.254
Hairdressing-course		-	.34	.542	.271
Hairdressing-activity			-	.808	.454
B. Carpenter-job	-	.28	.17	.906	.201
Carpenter-course		-	.27	.832	.228
Carpenter-activity			-	.713	.075
C. Builder-job	-	.23	.53	.999	.161
Builder-course		-	.35	.789	.186
Builder-activity			-	.956	.105
D. Computer programmer-job	-	.19	.32	.691	.299
Computer operator-job		.22	.30	.682	.273
Computers-course		-	.16	.942	.180
Working computers-activity			-	.479	.247

Thus, it is argued that there are different perceptions of the "same" item when it is listed as a job, a course of study or an activity. Finally, no item was included in more than one scale.

2. PRELIMINARY TECHNICAL DATA

The preliminary technical data provided in this paper relate to the reliability and consistency of each of the six interest categories or scales of the VIS. Additional data is outlined on the relationships among the six interest categories, and between the VIS and other variables such as ability or personality

Reliability

Reliability of the VIS scales was assessed using measures of internal consistency, split-half reliability and test-retest coefficients. Thus, both the stability and consistency of vocational interest responses were examined.

Coefficient of Internal Consistency

The intermal consistency estimates of reliability based on the Kuder-Richardson 20 formula are shown in Table 2. Essentially, these measures indicate the degree to which the items in each scale are measuring the same thing. Results for the original test-development sample indicate that the contents of each scale are relatively homogeneous (0.84 to 0.95). Separate data was collected on 1420 high school students and the internal consistency reliability estimates for each scale were as follows: 0.92, Practical; 0.84,

Scientific; 0.89, Artistic; 0.91, Social; 0.83, Business 0.84, Clerical.

Spilt-half Split-half reliability coefficients from the original sample (N=571) range from 0.86 to 0.96.

Test-Retest The stability of the scales is indicated by the correlation between test scores and scores on retest after a time lapse. For interests, this is an important measure, since the likes and dislikes of adolescents for particular items may vary in the short-term. Data on 96 high school students (44 female and 52 male) tested one-week apart showed the following test-retest coefficients, which range from 0.72 to 0.91:-

Scale	Test Retest Coefficient (N=96)
Practical	0.81
Scientific	0.83
Artistic	0.84
Social	0.91
Business	0.72
Clerical	0.83

Coefficients of internal consistency, split-half and test-retest stability, together with the Hoyt's analysis of variance index indicate that the VIS scales have extremely high reliability. In part, these high

reilabilities are due to the large number of items per scale, the methods of item selection and scale construction procedures.

TABLE 2: RELIABILITY OF VIS SCALES

Scale	Kuder-Richardson 20 Reliability	Rulon Split-Half Reliability	Hoyts Analysis of Variance Reliability
Practical	0.95	0.96	0.98
Scientific	0.90	0.92	1.00
Artistic	0.92	0.94	1.00
Social	0.92	0.94	0.99
Business	0.84	0.86	0.95
Clerical	0.91	0.87	0.97

Scale Relationships

The intercorrelations of the six VIS scales are presented in Table 3. Generally, the hexagonal arrangement of interests proposed by Holland was confirmed. The mean correlation for adjacent scales (RI, IA, AS, SE, EC, CR) was 0.37, for alternate scales on the hexagon (RA, IS, AE, SC, ER, CI) it was 0.31, and for opposite scales on the hexagon (RS, IE, AC) it was 0.21. These results are in accordance with earlier findings, that the relationships between the categories are inversely proportional to the size of the correlations between them. However, it was also

observed that the data are not in the perfect hexagonal order and this point was noted by Holland: "At best, the hexagonal resulting from real world data are misshapen polygons, but this arrangement is superior to the use of unrelated or unordered categories, (1974, p. 43).

TABLE 3: CORRELATION MATRIX-UPPER TRAINGULAR ELEMENTS (N=2459)*

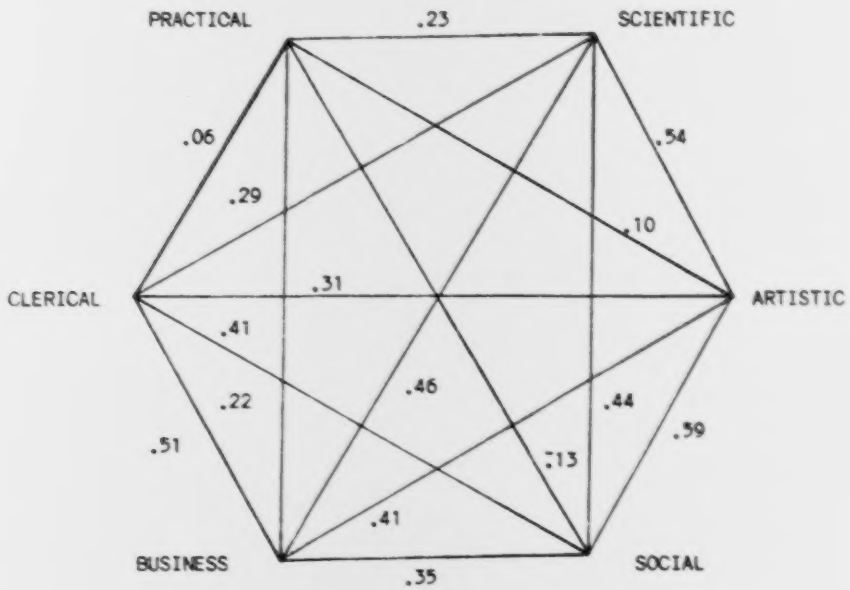
	PRACT	SCI	ART	SOC	BUS	CLER
Practical	-	233*	101	-137	223	067
Scientific		-	514	441	467	296
Artistic			-	590	410	310
Business				-	351	414
Clerical					-	514
						-
Mean	11.4	8.1	10.2	12.7	5.5	6.0
Stand. Dev.	10.3	5.9	7.7	8.9	4.1	5.0

Principal components analysis with rotation to the varimax criterion (Kaiser, 1958) produced results comparable with earlier studies, namely, a general factor probably related to method and a bipolar Things (practical) VS People (Social) component (cf Athanasou et al 1981). Loading for components with eigen values > 1.0 are listed in Table 4.

TABLE 4: PRINCIPAL COMPONENTS SOLUTION (n=2459)*

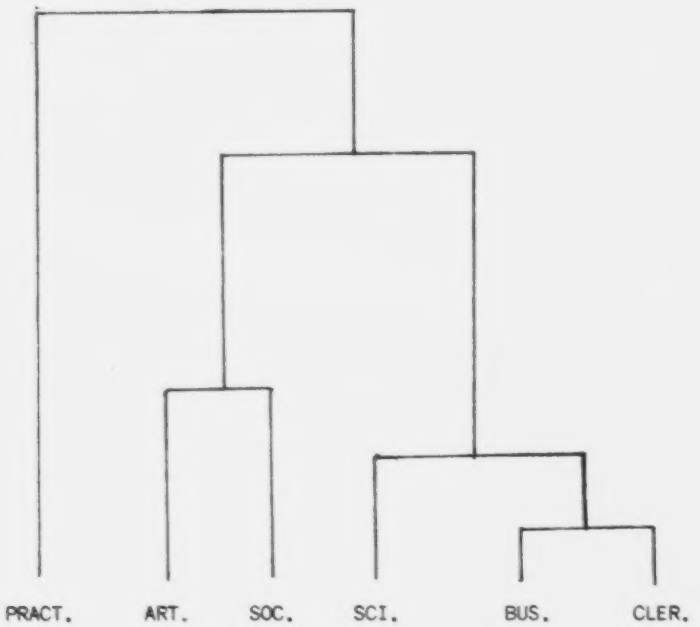
	UNROTATED		ROTATED		
Scales	I	II	I	II	h_2
Practical	20	90	05	93	87
Scientific	75	17	71	29	59
Artistic	77	-13	78	-00	61
Social	73	-47	80	-34	76
Business	74	22	70	35	61
Clerical	66	-05	66	06	44
Eigenvalue	2.75	1.15			
	45.8%	19.1%		% Total Variance	

* Decimal point omitted from Tables 9 and 10.



HEXAGONAL ARRANGEMENT OF VIS SCALES AND INTER-CORRELATIONS (N=2459)

Complete-link clustering using the hierachical procedure of Johnston (1967) produced a partial match to the Holland (1973) model, in terms of the ordering of interest categories. The independence of all scales especially the Practical scale was also confirmed by these results.



Complete-link clusters of VIS Scales.

Correlation with other measures of Holland's types

Correlations between the Occupations section in each scale of the VIS and six scores from the Occupations section of the Self-Directed Search were available from a pilot study of guidance clients(n=79). In all six instances correlations between the related Self-Directed Search and VIS scales (i.e. Practical with Realistic; Scientific with Investigative: Artistic with Artistic; Social with Social; Business with Enterprising; Clerical with Conventional) were highest

(see Table 3). Some perspective on these results was provided by correlations between Holland's Vocational Preference Inventory and the Self-Directed Search, also developed by Holland. The median correlation was 0.43 for males and 0.55 for females (Holland, 1979). For the six UNIACT (Lamb & Prediger, 1981) and VPI scales, the median was 0.46 for males and 0.52 for females. For the VIS, the median correlation was 0.64 and indicated the close relationship in format and style of these two measure of Holland types.

Other measures of interests, ability, and personality

Additional data relevant to the construct validity of the VIS are provided in this section. an understanding of what the VIS scales are measuring and the pertinence of these scales is gained by examining their relationships to cognitive measures, personality ratings, and vocational constructs.

Correlations with self-estimates of Kuder interests from the Kuder Interest Survey - KIS (Athanasou, 1980) are shown in Table 5 the KIS was administered the same time as the pilot questionnaire to 571 guidance clients. Both inventories were designed to measure basic interests, and the highest correlations for related scales support the expected results.

Relationships between the VIS Occupations items in each scale and the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1976) are indicated in Table 5 Data were based on the responses of 30 guidance clients and support previous findings of low correlations between personality and vocational interests (c.f. Athanasou et al. 1982). The New England Personality Questionnaire (Fitzgerald & Cole 1976) which measures extraversion, anxiety and flexibility was administered with the VIS to 77 senior high school students. Results (see Table 5) again confirm the pattern of low correlations with career interests. The VIS and the Marlow - Crowne Social Desirability scale (Greenwald & Satow, 1970) were also administered to another separate sample of 82 high school students. Results indicate the responses to the VIS are not correlated with social desirability response set (see Table 5).

The VIS was correlated with a variety of cognitive measures. Linguistic and quantitative reasoning were assessed by the Wesman Personnel Classification Test with 134 high school students. A general reasoning factor was assessed by using the B Scale of the IPAT Sixteen Personality Factor Questionnaire with 92 high school students. General knowledge was assessed by the information sub-test of the Naylor-Harwood Adult Intelligence Scale (an Austrlaian adaptation of the Wecshler Adult Intelligence Scale). This was administered to 124 high school students in order to

measure an aspect of verbal IQ and breadth of interests. Results indicated low correlations between interests and abilities (Table 5). The highest correlation of 0.35 was between the NHAIS Information and Scientific interests.

Correlations with vocational characteristics

Tables 5 also provides an outline of the relationship between vocational interests on the VIS and career-related characteristics. These results were based on separate studies of high school students. The total score on the Job Knowledge Survey (Loesch, 1978) was not significantly related ($\alpha = 0.05$) to any of the six VIS scales. The level of career decidedness was assessed by the Career Decision Scale (Holland & Holland, 1977). Again, this variable was relatively independent from interests. When subjects were divided into decided or undecided based on the Occupations Alternative Questionnaire (Slaney, 1980) it was apparent that being decided or undecided about a career was not significantly correlated with career interests. The extent of career exploration was assessed using a checklist - Finding out facts about jobs (Athanasou, 1986). Except for the Practical and Clerical scales, there was a significant ($p < 0.05$) positive correlation between the extent of career exploration and the level of some career interests.

Finally, high school students' (N=946) self-ratings of their vocational interests on a 7 - point Likert scale (Very high to very low) correlated significantly and positively with measured interests from the six scales of the VIS.

TABLE 5 CORRELATIONS OF SCALES WITH OTHER MEASURES*

SCALES	PRACTICAL	SCIENTIFIC	ARTISTIC	SOCIAL	BUSINESS	CLERICAL
Self-Directed Search (N=79)[1]						
Realistic	64	32	-01	-22	24	80
Investigative	18	69	29	17	26	19
Artistic	-00	33	73	44	47	09
Social	06	46	43	60	42	21
Enterprising	28	32	37	24	63	37
Conventional	13	20	07	10	34	52
Self-estimates (N=946)						
Practical	48	09	-03	-18	02	-04
Scientific	06	51	12	04	22	06
Artistic	-14	10	50	22	07	01
Social	-20	17	26	57	10	11
Business	-05	07	12	18	40	20
Clerical	-08	-03	-04	07	22	60
Kuder Interest Survey (N=571)[2]						
Outdoor	29	27				
Mechanical	60			-32		52
Computational					23	
Scientific		50				
Persuasive				25	34	
Artistic			54	20		
Literary			25	24		
Musical			23			
Social Service	-23			51		
Clerical				20		58
Eysenck Personality Questionnaire (N=30)[1,2]						
Psychoticism	10					
Extraversion			31			
Neuroticism					37	38
Lie		24				

* Decimals omitted
[1] Correlation with VIS-Occupations section
[2] Highest Correlations only

SCALES	PRACTICAL	SCIENTIFIC	ARTISTIC	SOCIAL	BUSINESS	CLERICAL
New England Personality Questionnaire (N-77)[2]						
Extraversion	36	-15			16	
Anxiety			-18			
Flexibility			11			-16
Marlow-Crowne Social Desirability Scale (N=82)						
Social Desirability	07	13	13	06	-07	10
Wesman Personnel Classification Test (N=134)						
General Reasoning	06	03	-11	-25		-22
IPAT Intelligence Factor B (N=92)						
Factor B - Intelligence	-04	24	20	-03	14	-05
NHAIS Information Test (N=124)						
Information	16	34	27	-12	16	-11
Job Knowledge Survey (N=77)						
Job Knowledge	-05	05	-14	02	-06	01
Career Decision Scale (N=64)						
Decidedness	17	-04	-05	14	-02	-22
Occupational Alternatives Questionnaire (N=64)						
Decide (N=45) vs Undecided (N=19)	09	01	19	31	08	78
Finding out Facts about Jobs (N=101)						
Career exploration	08	48	48	45	22	05

* Decimals omitted
[1]Correlations with VIS
[2]Highest correlations only

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APPENDIX RESPONSE RATES AND ITEM-TOTAL CORRELATIONS

Item	Corrected Biserial Item-Total Correlations	Proportion answering 'like'
PRACTICAL		
Farmer	0.547	0.296
Greenkeeper	0.497	0.182
Labourer	0.706	0.091
Surveyor	0.584	0.144
Grazier	0.499	0.093
Sportsman/Sportwoman	0.423	0.326
Mechanic	0.912	0.245
Electrician	0.876	0.203
Carpenter	0.906	0.201
Engineer	0.791	0.184
Plumber	0.940	0.121
Butcher*	0.639	0.084
Builder	0.999	0.161
Boatbuilder	0.428	0.278
Boilermaker	0.930	0.079
Truck Driver	0.785	0.119
Fitter & Turner	0.919	0.098
Panelbeater	0.880	0.119
Auto Electrician	1.000	0.123
Civil Engineer	0.660	0.079
Tiler	0.808	0.084
Apprentice	0.809	0.245
Miner	0.799	0.079
Technician	0.788	0.103
Pilot	0.864	0.140
Cabinetmaker	0.819	0.149
Concreter	0.903	0.049
Driver	0.698	0.137
Electrical Fitter/Mechanic	0.913	0.144
Electronic Technician	0.731	0.124
Electronic Engineer	0.819	0.072
Machinist	0.937	0.060
Toolmaker	0.627	0.356
Maps	0.555	0.396
Engineering	0.418	0.333
Mechanics	0.667	0.275
Technical Courses	0.413	0.417
Electronics	0.907	0.098
Apprenticeships	0.701	0.175
Boilermaking	0.798	0.137
Building	0.789	0.186
Carpentry	0.832	0.228
Driving	0.933	0.166
Civil Engineering	0.917	0.119
Industrial Arts	0.533	0.133
Metalwork	0.709	0.133
Plumbing	0.594	0.403
Woodwork	0.634	0.126
Shooting	0.796	0.182
Bricklayer	0.948	0.131

Item	Corrected Biserial Item-Total Correlations	Proprortion answering 'like'
Playing Football	0.872	0.212
Fighting	0.671	0.166
Car racing	0.712	0.201
Driving	0.769	0.264
Laying bricks	0.869	0.208
Operating machines	0.948	0.061
Constructing	0.986	0.133
Repairing	0.874	0.182
Fixing cars	0.583	0.245
Doing carpentry	0.713	0.075
Doing metalwork	0.558	0.109
Moving lawns	1.000	0.103
Building	0.956	0.105
Riding motor-bikes	0.762	0.219
SCIENTIFIC		
Marine Engineer	0.583	0.119
Doctor	0.639	0.205
Dentist	0.616	0.273
Veterinarian	0.608	0.273
Scientist	0.844	0.165
Pharmacist	0.481	0.180
Physicist	0.692	0.084
Zoologist	0.680	0.243
Geologist	0.808	0.114
Orthodontist	0.545	0.049
Surgeon	0.737	0.149
Physiotherapist	0.449	0.112
Animals	0.482	0.515
Agriculture	0.415	0.482
Wildlife	0.512	0.229
Environment	0.556	0.333
Nature	0.477	0.329
Science	0.493	0.222
Chemistry	0.566	0.471
Medicine	0.694	0.349
Biology	0.699	0.263
Physics	0.626	0.243
Dentistry	0.754	0.238
Geology	0.686	0.166
Evolution	0.734	0.156
Fossils	0.733	0.275
Veterinary	0.586	0.140
Zoology	0.535	0.088
Psychology	0.794	0.117
Sociology	0.693	0.172
Bushwalking	0.734	0.135
Experimenting	0.705	0.212
Thinking	0.717	0.228
Comprehending	0.538	0.194
Solving problems	0.503	0.126

Item	Corrected Biserial Item-Total Correlation	Proportion answering 'like'
ARTISTIC		
Painter	0.654	0.196
Architect	0.514	0.231
Artist	0.944	0.256
Interior Decorator	0.764	0.308
Fashion Designer	0.713	0.233
Florist	0.491	0.079
Jeweller	0.580	0.161
Photographer	0.611	0.370
Designer	0.885	0.205
Signwriter	0.665	0.235
Tracer	0.677	0.067
Actor/Actress	0.642	0.270
Journalist	0.539	0.224
Writer	0.595	0.142
Musician	0.435	0.187
Dancer	0.557	0.203
Flowers	0.519	0.273
Crafts	0.608	0.114
Art	0.440	0.615
Architecture	0.725	0.417
Painting	0.777	0.320
Art History	0.857	0.277
Acting	0.802	0.326
Poetry	0.906	0.254
Cultures	0.922	0.165
Doing handcrafts	0.760	0.266
Rug making	0.656	0.280
Joking	0.518	0.468
Drawing	0.502	0.243
Painting	0.541	0.284
Designing	0.481	0.261
Sketching	0.458	0.117
Creating	0.574	0.191
Sculpting	0.927	0.277
Doing pottery	0.605	0.184
Acting	0.819	0.210
Photography	0.678	0.102
Writing	0.693	0.222
Going to theatre/plays	0.633	0.112
Singing	0.576	0.100
SOCIAL		
Hairdresser	0.686	0.254
Teacher	0.604	0.303
Nurse	0.714	0.173
Social Worker	0.669	0.317
Vocational Guidance Officer	0.487	0.142
Child Care Assistant	0.702	0.270
Pre-school teacher	0.726	0.259
Nurse's aide	0.634	0.116
Occupational Therapist	0.444	0.079
Cooking	0.552	0.243

Item	Corrected Biserial Item-Total Correlation	Proportion answering 'like'
ARTISTIC		
Home Economics	0.451	0.271
Hairdressing	0.542	0.335
Health	0.620	0.461
Teaching	0.638	0.231
People	0.648	0.243
Nursing	0.670	0.219
Playing netball	0.656	0.455
Doing gymnastics	0.576	0.496
Going to the park	0.624	0.571
Going for picnics	0.714	0.471
Sewing	0.708	0.553
Making clothes	0.685	0.173
Hairdressing	0.808	0.454
Socialising	0.810	0.478
Speaking/Talking	0.803	0.524
Meeting people	0.782	0.235
Shopping	0.789	0.518
Visiting people	0.798	0.462
Nursing	0.661	0.312
Caring	0.701	0.445
Giving	0.665	0.613
Sharing	0.575	0.489
Treating sick people	0.407	0.420
Helping	0.563	0.205
Working with people	0.636	0.229
Teaching	0.457	0.217
Listening	0.594	0.291
Loving	0.585	0.282
Being neat	0.674	0.173
ENTERPRISING		
Sales Representative	0.705	0.123
Manager	0.815	0.207
Shopkeeper	0.395	0.128
Business Owner	0.773	0.172
Retailer	0.616	0.060
Insurance	0.583	0.030
Travel Agent	0.403	0.306
Executive	0.854	0.103
Prime Minister	0.500	0.138
Lawyer (Solicitor/Barrister)	0.726	0.194
Economics	0.492	0.219
Commerce	0.633	0.298
Politics	0.746	0.184
Business	0.749	0.198
Government	0.765	0.110
Law	0.737	0.182
Selling	0.818	0.182
Organising	0.777	0.102

Item	Corrected Biserial Item-Total Correlations	Proportion answering 'like'
Managing	0.744	0.180
CLERICAL		
Accountant	0.754	0.247
Banker	0.812	0.250
Computer Programmer	0.691	0.299
Bookkeeper	0.883	0.116
Secretary	0.815	0.201
Clerk	0.895	0.170
Typist	0.860	0.161
Bank Clerk	0.892	0.191
Computer Operator	0.682	0.273
Officer Worker	0.967	0.133
Receptionist	0.838	0.182
Cashier	0.715	0.068
Stenographer	0.785	0.070
Telephonist	0.833	0.096
Mathematics	0.751	0.273
Bookkeeping	0.942	0.180
Secretarial	0.669	0.123
Working Computers	0.479	0.247
Typing	0.948	0.138
Accounting	0.595	0.096
Doing Office work	0.888	0.189
Counting	0.888	0.189